

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: The claimed invention is drawn to the following:

1. **(Previously presented)** A process for patterning a substrate, comprising:

(a) coating the substrate with a film of a photoresist composition comprised of (i) a polymer that is rendered soluble in aqueous base at a temperature of less than about 100°C by acid-catalyzed deprotection of pendent acetal- or ketal-protected carboxylic acid groups, and (ii) a photoacid generator;

(b) patternwise exposing the film to an imaging radiation source so as to form a latent, patterned image in the film;

(c) baking the exposed film at a post-exposure bake temperature between about 25°C and 80°C; and

(d) developing the latent image with a developer to form a patterned substrate,

wherein the polymer is prepared by polymerization of a monomer mixture, the mixture comprising (a) at least one first olefinic monomer containing an acetal or ketal linkage, the acid-catalyzed cleavage of which renders the polymer soluble in aqueous base, and (b) at least one second olefinic monomer selected from (i) an olefinic monomer containing a pendant fluorinated hydroxyalkyl group R^H , (ii) an olefinic monomer containing a pendant fluorinated alkylsulfonamide group R^S , and (iii) combinations thereof, wherein R^H has the formula $-L^3-CR^{11}R^{12}-OH$, in which:

L^3 is directly attached to an olefinic carbon, and is selected from C_1-C_{12} alkylene, substituted C_1-C_{12} alkylene, C_3-C_{15} alicyclic, C_3-C_{15} fluoroalicyclic, and combinations thereof;

R^{11} is selected from hydrogen, C_1-C_{24} alkyl, and substituted C_1-C_{24} alkyl; and

R^{12} is C_1-C_{24} alkyl or fluorinated C_1-C_{24} alkyl, provided that at least one of R^{11} and R^{12} is fluorinated, and further wherein R^{11} and R^{12} can be taken together to form a ring.

The amendment to claims 25, 29 overcome the rejection under 35 U.S.C. 112, second paragraph and with no remaining art rejections of record or deficiencies, claims 1-15, 18,19, and 21, 23-35 are seen as allowable and passed to issue.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526

The fax phone number for the USPTO is (571) 273-8300.

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John S. Chu/

Primary Examiner, Art Unit 1795

J.Chu

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